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| FOLEY HOAG, LLP PATENT GROUP, WORLD TRADE CENTER WEST 155 SEAPORT BLVD BOSTON, MA 02110 | | | EXAMINER NGUYEN, TUAN VAN | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3731 | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/702,189

Applicant(s)

DENNIS, WILLIAM G.

Examiner

TUAN V. NGUYEN

Art Unit

3731

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 60-70 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 60-70 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/08)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

1. In previous Office action, claims 1-61 were pending, claims 16-59 were withdrawn from further consideration and claims 1-15 and 60-61 were examined and rejected.

Amendment

2. According to the Amendment applicants filed on November 13, 2007, claims 16-59 have been cancelled and claims 62-70 are new. Accordingly, claims 1-15 and 60-70 are presented for examination.
3. Examiner acknowledges applicant amended to the specification. No new matter is added.

Response to Amendment

4. Claims 7 and 14 have been amended to overcome the objection, therefore, the objection to claims 7 and 14 in previous Office action is hereby withdrawn.
5. Applicant's arguments filed on November 13, 2007 with respect to claim rejection under 35 USC § 102 and 103 have been fully considered but they are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action
- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:
1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
8. **Claims 1-15 and 60-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frantzen et al. (U.S. 3,193,732) in view Watkin (US 3,797,076).**
9. Referring to claims **1-6, 8-13, 15, and 60-68**, Frantzen discloses (see Figs. 6A-6C; col. 8, lines 28-40; and col. 14, lines 28-37) an occlusion clip comprising: made from a single wire includes an upper single element 305; a lower single element 310; a occlusion member plane defined by upper and lower single elements; and a spring portion 315 connecting the proximal upper member end to the proximal lower member, the spring portion having a interior spring height dimension in the

occlusion member plane being less than twice the wire diameter and a maximum occlusion width dimension perpendicular to the occlusion member plane that is no greater than the wire diameter and the spring height dimension increases as a rotational separation between the single element upper occlusion member and the single element lower occlusion member increases. Figure 6B discloses the spring portion 315 defines a width dimension perpendicular to the occlusion member plane that is no greater than the wire height. Frantzen also discloses may be made of any suitable medical grade material including titanium super-elastic metals (see col. 8, lines 35-40). Frantzen discloses the invention substantially as claimed except for a guide portion extending from the distal upper member end and a guide portion extending from the distal lower member end wherein the guide portion is wider than the wire width.

10. However, Watkin discloses such a feature. Watkin discloses (see Figs. 1 and 2) a spring clip comprising, among other things, a lip or a guide portion 18 extending from the distal upper arm 12 and a lip or a guide portion 20 extending from the distal lower arm 14 wherein the guide portion is wider than the width of arms 12 and 14 (see col. 3, lines 28-42). Apparently the design intended of the guide portions is so that the lips enable the clip to claim over any article (see col. 2, lines 29-32). Therefore, it would have been obvious to one of ordinary skill in the art to incorporate the lips as disclosed by Watkin into the clip of Frantzen so that it too would have the same advantage.

11. Referring to **claims 5, 6, 8, 9 and 11-12**, Frantzen discloses the invention substantially as claimed except for the wire has a diameter in a range from about 10 mils to about 50 mils. Noting that Frantzen discloses the shape and features of the surgical clip can be produced according to surgical procedure (see col. 13, lines 44-56). It would have been obvious to one of ordinary skill in the art to made the clip from a wire having a diameter in the range as claimed by the applicant, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. Extrinsic evidence, Schmidt et al (U.S. 5,053,045) discloses a surgical clip that formed a single wire wherein the wire is formed from titanium and has a diameter of 37 mils or 40 mils (see col. 4, lines 65 to col. 5, line 29).
12. Referring to **claims 7 and 14**, Frantzen discloses the invention substantially as claimed except for specifically discloses the spring biases the upper and lower single occlusion members to exert a maximum occluding force of about 0.20 pounds. Since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. It would have been obvious to one of ordinary skill in the art to design the surgical clip as disclosed by Frantzen to have a spring force of about 0.20 pounds of compressive force as claimed by the applicant. Extrinsic evidence, Schmidt et al (U.S. 5,053,045) discloses a surgical clip wherein the clip has a spring force applied to the upper

- and lower single occlusion members to of about 200 grams or 0.20 pound (col. 8, lines 4-8).
13. Referring to **claims 69 and 70**, noting that Frantzen discloses the clip may be made of any suitable medical grade material including titanium super-elastic metals (see col. 8, lines 35-40) but Frantzen fails to disclose the material is titanium alloy comprises Ti-6Al-4V ELI. However, titanium alloy such as Ti-6Al-4V ELI is old and well known in the art. Extrinsic evidence, Murley et al (US 4,775,426) discloses surgical titanium alloy such as Ti-6Al-4V ELI (see Background of The Invention).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUAN V. NGUYEN whose telephone number is (571)272-5962. The examiner can normally be reached on M-F: 9:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Todd Manahan can be reached on 571-272-4713. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/T. V. N./

Examiner, Art Unit 3731

/ (Jackie) Tan-Uyen T. Ho/
SPE of Art Unit 3773